

REMARKS

By the Office Action of mailed September 13, 2004, Paper No. 08312004, Claims 48-54 are pending.

1. The Claim Rejections Under 35 U.S.C. §103(a)

Claims 45-52 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Chinese patent (CN 1146415A) in view of WO 9856662A. Claims 53 and 54 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over CN '415 and WO '662 further in view of McDaniel (U.S. 4,256,526).

Applicant respectfully requests reconsideration and withdrawal of the rejections. Applicant submits that none of the cited references, either taken alone or in combination, teach or suggest all of the features recited in the claims.

There are only two independent claims among the claims presently pending, namely claims 45 and 48. Claim 48 recites a process for folding and sealing an outer wrapper on a dimensionally stable pack which includes the steps of providing a shrink wrapping film for forming an outer wrapper, wrapping the shrink wrapping film around the pack to form side tabs, bottom tabs, and top tabs, causing the side tabs to overlap one another and thermally pre-sealing the sides tabs, causing the bottom tabs to overlap one another and the top tabs to overlap one another and thermally pre-sealing the overlapping bottom and top tabs, permanently sealing the side tabs, and permanently sealing the bottom and top tabs. Claim 48, thus, cites a process in which the side tabs are first pre-sealed and then permanently sealed and the bottom and top tabs are also first pre-sealed and subsequently permanently sealed.

Claim 45 describes a process for producing a pack made of thin cardboard with an outer wrapper made of thermally sealable and shrinkable material which includes providing a blank for forming the outer wrapper and folding the blank around the pack in a tubular shape such that the side tabs (See Figs. 1 and 2, elements 20 and 21) of the outer wrapper overlap one another, then connecting the side tabs 20, 21 to one another in the region of their overlap, thereafter folding the transverse (See Fig. 1, elements 23 and 24) and longitudinal (See Fig. 1, elements 25, 26) folding tabs assigned to the end wall 18 and base wall 19 such that the transverse folding tabs and the longitudinal folding tabs partially overlap each other and then connecting the transverse and longitudinal folding tabs to one another in the region of their overlap. The process of Claim

45 next recites that the packs so wrapped are moved upward into a pack tower where the side tabs are permanently sealed in the region of their overlap by full surface sealing (illustrated as region 22 in Fig. 1), and thereafter transporting the pack laterally to a sealing path where the transverse and longitudinal folding tabs are surface sealed. The sealing of the packs is then completed by subjecting the wrapper to a shrinking process by means of surface heat transfer.

Claims 45 and 48, thus, recite a process in which the side tabs of a wrapper are sealed not once but twice and also the top and bottom tabs (as recited in Claim 45), alternatively the transverse and longitudinal folding tabs (as recited in Claim 45), are sealed twice. Additionally, the second sealing of the side tabs in the region of their overlap presented by element 22 in Applicant's figures occurs after the top and bottom tabs of Claim 48 are first sealed, and in the case of Claim 45 after the transverse and longitudinal folding tabs are first sealed. The second sealing of the side tabs in the region of their overlap 22, thus, occurs only in the region illustrated in, for example Fig. 1, which is in the region of the overlap of the side tabs between end wall 18 and base wall 19 of the pack.

In contrast, the Chinese '415 patent as represented by its U.S. counterpart 5,701,725, teaches only a single sealing step for the side tabs and a single sealing step for its top and bottom tabs. More particularly, Fig. 1 of the U.S. '725 patent illustrates the sealing of the side tabs, tabs 22 and 23 of wrapper 34, and top and bottom longitudinal tabs, 24 and 25, as well as transverse tabs 35. Transverse tabs 35 are defined as the portion of the side tabs which laterally project beyond the top and bottom end walls of the pack. (Col. 4, lines 57-58) Fig. 1 illustrates that the side tabs 22 and 23 are sealed only once in the method and system of the U.S. '725 patent. This is illustrated by broken line 56. More particularly, U.S. '725 patent states: "Device 48 comprises a laser source 52 for emitting a laser beam 53, which is preferably only partly focused, by a reflecting and focusing device 54 and through a slit 55 formed in plate 32 parallel to axis 15, onto a sealing strip 56 extending along portion 22 and facing slit 55." (Col. 4, lines 7-11). The laser beam 53 is swept along strip 56 to seal portions 22 and 23 of wrapper 34. (Col. 4, lines 16-17). Sealing strip 56 specifically excludes laterally projecting tab portions 35. Thus, Fig. 1 and the text of the U.S. '725 patent make clear that the side tabs 22 and 23 are sealed only once along sealing strip 56 and that the laterally projecting tab portions 35 are not sealed by device 48.

Fig. 1 of the U.S. '725 patent teaches that the pack is then moved to a second sealing

station where the bottom end tabs 24 and 25 are sealed by laser device 50. (Col. 4, lines 18-29). Figs. 5 and 6 illustrate a device 71 which serves to fold laterally projecting tabs 35 simultaneously with longitudinal top and bottom tabs 24 and 25. Alternatively, Figs. 3 and 4 illustrate the sealing of side tabs 22 and 23 along sealing strip 56 by one laser device 48 and laterally projecting tabs 35 and top and bottom longitudinal tabs 24 and 25 simultaneously by way of a second laser device 78 at the same sealing station.

Thus, U.S. '725 makes it clear that the side tabs along sealing strip 56 are sealed only once by one sealing device, and the top and bottom longitudinal tabs along with laterally projecting tabs 35 are sealed only once by a separate sealing device. The problem addressed by this reference is avoiding the danger of burning, i.e. severing, the wrapper where it is sealed. See Col. 1, lines 39-41 and Col. 4, lines 42-44. This burning problem addressed by the U.S. '725 reference teaches away from the second sealing of the same tabs.

The references relied upon for the rejection of the pending claims, including independent Claims 45 and 48, thus do not teach all of the steps recited in Applicant's claims. More particularly, the side tabs 20 and 21 in their region of overlap 22 of Applicant's wrapper are sealed in a first step and subsequently sealed a second time in a second step. Similarly, Applicant's longitudinal folding tabs 24 and 25, also referred to as top and bottom tabs, are sealed in a first step after being folded over end wall 18 and base wall 19 and subsequently sealed a second time in a separate step. The second sealing of the side tabs 20 and 21 occurs after the longitudinal tabs 24 and 25 and transverse tabs 23 and 24 are folded about the end wall 18 and base wall 19 of the pack, thus limiting the second sealing of side tabs 20 and 21 to the region of their overlap illustrated as region 22 between the end wall 18 and the base wall 19 in Fig. 1. This process as recited in Applicant's claims is not taught or suggested by any of the cited references.

Since the cited references do not teach or suggest every step of the process recited in Claims 45 or 48, they do not support the present rejection of the claims. The region of overlap 22 of Applicant's side tabs 20 and 21 that is sealed twice is analogous to the region of sealing strip 56 of the Chinese '415 reference that is sealed only once. Applicant's transverse tabs 23 and 24 that project beyond and are folded about the end wall 18 and base wall 19 are analogous to laterally projecting tabs 35 of the Chinese reference. Tabs 35 of the Chinese reference that are outside of the region of sealing strip 56 are sealed only once by either device 50 (Fig. 1) or device

78 (Figs. 3,4). Likewise, Applicant's longitudinal end tabs 25, 26 that are sealed twice are analogous to end portions 24 and 25 of the Chinese reference that are sealed only once.

Additionally, the cited references do not teach or suggest steps (e) and (f) of Claim 45. In particular, the Chinese reference does not teach moving the packs upwardly into a pack tower where the side tabs are permanently sealed. Fig. 1 of the Chinese reference shows the sealing of all of the tabs occurs prior to arrow 46 representing upward movement of the sealed packs into a pack tower. The Chinese reference does not teach or suggest full surface sealing of the side tabs in the region of their overlap recited in step (e) and illustrated in Fig. 1. Nor does the Chinese reference teach or suggest transporting the pack laterally after it has moved upwardly into the pack tower to a sealing path where the transverse and longitudinal folding tabs are surface sealed, again since all tabs are sealed prior to transport upwardly into a pack tower.

2. Fees

No fees are believed due as a result of this Response, other than the fees for the extension of time referenced earlier. The Office is authorized, however, to charge any fee deficiency in connection with this amendment to Deposit Account no. 20-0778.

CONCLUSION

In view of the comments and remarks herein, Applicants respectfully submit that all of the pending claims are in condition for allowance. Accordingly, Applicants respectfully request early and favorable action. Should the Examiner have any further questions or reservations, the Examiner is invited to telephone the undersigned Attorney at 770.933.9500 (x213).

Respectfully submitted,



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